

## 1 CLAIMS

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3 1. A piston rod assembly for coupling between a power end  
4 and a fluid end of a high pressure reciprocating pump,  
5 the assembly comprising one or more clamping members  
6 arranged relative to a rod axis between the power end  
7 and the fluid end, each member having a first end  
8 adapted to grip the power end component, and a second  
9 end adapted to grip the fluid end component, and at  
10 least one member including one or more tensioning  
11 means, wherein said tensioning means comprise a piston  
12 to provide a load in said tensioning means orthogonal  
13 to said rod axis and thereby secure said components  
14 against release.

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16 2. A piston rod assembly as claimed in Claim 1, wherein,  
17 the clamping members are part cylindrical bodies which  
18 when arranged on the rod axis provide a substantially  
19 cylindrical body.

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21 3. A piston rod assembly as claimed in Claim 1 or Claim 2  
22 wherein, there are two clamping members, an upper  
23 clamping member and a lower clamping member.

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25 4. A piston rod assembly as claimed in any preceding  
26 Claim wherein, the first and second ends include a  
27 contact face parallel to the rod axis on an inner  
28 surface.

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30 5. A piston rod assembly as claimed in Claim 4, wherein  
31 each face provides a recess on the inner surface in  
32 which a portion of the power end component or fluid  
33 end component is located such that the component is

1       gripped and held when the clamping members are brought  
2       together by the tensioning means.

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4       6. A piston rod assembly as claimed in any preceding  
5       Claim wherein each component end and the first/second  
6       end provide a knuckle joint.

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8       7. A piston rod assembly as claimed in any one of Claims  
9       1 to 5 wherein each component end and the first/second  
10      end provide a ball and socket.

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12      8. A piston rod assembly as claimed in any preceding  
13      Claim wherein each piston is slideable within an  
14      hydraulic cylinder.

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16      9. A piston rod assembly as claimed in any preceding  
17      Claim wherein each piston includes at least one stem  
18      adapted to receive a nut or a lock.

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20      10. A piston rod assembly as claimed in Claim 9 wherein  
21      each stem extends from one clamping member through an  
22      aperture in an adjacent clamping member, and wherein a  
23      nut engages the stem to couple the clamping members.

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25      11. A piston rod assembly as claimed in Claim 9 or Claim  
26      10 wherein a spring is arranged within the hydraulic  
27      cylinder to tension the said stem.

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29      12. A piston rod assembly as claimed in any one of Claims  
30      9 to 11 wherein the assembly includes non-rotational  
31      means for preventing rotation of said stem.

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- 1    13. A piston rod assembly as claimed in Claim 12 wherein
- 2        the non-rotational means is a pin locating in a
- 3        matching recess arranged parallel to the stem.
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- 5    14. A piston rod assembly as claimed in any one of Claims
- 6        8 to 13 wherein a space is defined between a base of
- 7        the cylinder and a base of the piston for
- 8        accommodating hydraulic fluid.
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- 10   15. A piston rod assembly as claimed in any one of Claims
- 11        8 to 14 wherein the assembly includes a fluid inlet
- 12        port to permit the input of hydraulic fluid to the
- 13        cylinder.
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- 15   16. A piston rod assembly as claimed in Claim 15 wherein
- 16        a chamber is included in the/each member to provide a
- 17        common feed for hydraulic fluid to all cylinders
- 18        within the member.
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